

**METHOD AND APPARATUS FOR
THERAPEUTIC TREATMENT OF SKIN**

Reference to Related Applications

This application is a continuation-in-part of U.S. Patent Application Serial No. 08/998,963, filed December 29, 1998, now U.S. Patent No. 6,325,769, issued December 4, 2001, which is a continuation of U.S. Patent Application Serial No. 09/340,997, filed June 28, 1999, and incorporated herein by reference.

Background Of The Invention

The present invention relates generally to skin therapy. More particularly, the present invention relates to the use of such therapy for reducing rhytides of the skin (i.e., skin wrinkles), especially facial rhytides.

Human skin is basically composed of three layers. The outer, or visible layer is the stratum corneum. The stratum corneum is essentially a thin layer of dead skin cells that serves, among other things, as a protective layer. Below the stratum corneum is the epidermis layer. The epidermis layer is a cellular structure that forms the outermost living tissue of the skin. Below the epidermis layer is the dermis layer that contains a variety of tissues such as sweat glands, nerves cells, hair follicles, living skin cells, and connective tissue. The connective tissue gives the dermis layer body, shape, and support. Since the epidermis layer lies on top of the dermis layer, the shape, smoothness, and appearance of the epidermis layer is in part determined by the shape of the dermis layer (and largely the connective tissue). Thus, variations in the shape of the connective tissue tend to appear as variations in the epidermis layer.

There are a number of methods currently being used to reduce or eliminate skin wrinkles, particularly facial skin wrinkles. Some of these methods include the use of lasers, cryo-peeling, chemical-peeling, and dermabrasion. These methods appear to stimulate or irritate the dermis layer so that a biological response results that produces new connective tissue which in turn reduces or eliminates skin wrinkles in the treated area.

However, the cryo-peeling, dermabrasion and laser ablation methods generally result in

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significant damage to the epidermis and dermis layers. In these methods, the epidermis layer may be peeled or burned away. This presents several problems: opportunistic infections may invade the dermis layer and this complicate or prolong recovery; the procedure may cause a patient significant discomfort and pain; and the skin may appear raw and damaged

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